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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,723

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EXAMINER

ZHU, BO HUI ALVIN

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/815,723

Applicant(s)

WOLF ET AL.

Examiner

Bo Hui A. Zhu

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation, "a timer", as claimed in claim 4, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- (1) with regard to claim 3:

The limitation of "monitoring ... for the presence of predefined signal patterns, wherein said signals appear to be valid if said predefined bit pattern is detected" is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- (2) with regard to claim 4:

The limitation of "switch-over ... is enabled only if after lapse of said timer the condition persists that the selected signal does not contain bit level transitions" is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courtney et al. (US 7,167,442) in view of Ohwada et al. (Us 5,119,380).

(1) with regard to claims 1, 6 and 7:

Courtney et al. discloses a system, comprising: first and second redundant signal paths carrying first and second redundant signals (PATH\_A and PATH\_B, Fig. 3), respectively; a selector for selecting either of the two redundant signals as active (38, Fig. 3); and first and second monitors (32 and 34, Fig. 3) coupled to the first and second signal paths, respectively, wherein said selector is controlled by the monitors (38 is controlled by 32 and 34 via switch control 36); and said selector is controlled by the transition monitors to select the signal path with the better quality (column 6, lines 10 – 20).

Courtney et al. however does not disclose monitoring said first and second signals for bit level transitions; and in that said selector is controlled by the transition monitors to alter selection in the event that the selected signal does not contain bit level transitions while the non-selected signal does.

Ohwada et al. teaches monitoring a signal for bit level transitions and in the event that the signal does not contain bit level transitions there is a failure in the transmission

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path of the signal (column 1, lines 24 – 29 and 54 – 57). It would have been desirable to monitor a signal for bit level transitions and to select a different signal when the signal is detected not to contain bit level transition because it would provide a simple and effective error detection system to improve the reliability of the transmission signal as having no bit level transition in the signal such as in the case of having a string of zero bit is usually an indication of a fault in the transmission path of the signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the method as taught by Ohwada et al. in the system of Courtney et al.

(2) with regard to claim 2:

Courtney et al. disclose first and second delay elements coupled to said first and second signal paths (40 and 42, Fig. 3).

Courtney et al. does not disclose said selector is controlled to alter selection when the selected signal does not contain bit level transitions for a bit sequence of N bits while the non-selected signal does contains bit level transitions in the same interval.

Ohwada et al. teaches monitoring a signal for bit level transitions and in the event that the signal does not contain bit level transitions for a bit sequence of eight bits there is a failure in the transmission path of the signal (column 1, lines 54 – 57). It would have been desirable to monitor a signal for bit level transitions and to select a different signal when the signal is detected not to contain bit level transition for a bit sequence of eight bits because it would provide a simple and effective error detection system to improve the reliability of the transmission signal as having no bit level transition in the signal such as in the case of having a string of zero bit is usually an indication of a fault

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in the transmission path of the signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the method as taught by Ohwada et al. in the system of Courtney et al.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Courtney et al. (US 7,167,442) in view of Ohwada et al. (US 5,119,380) and further in view of Floyd et al. (US 4,528,662).

(1) with regard to claim 5:

Courtney et al. does not disclose using pull-up or pull-down circuits for pulling a failed signal to a predefined level.

Floyd et al. teaches using pull-up resistors for pulling a disconnected signal to a predefined level 1 (column 20, lines 10 – 13). It would have been desirable to use pull-up resistors for pulling a disconnected signal to a predefined level because it would provide a simple method for indicating a disconnecting point in the system and ensure the proper operation of the system when disconnections of circuits occurs in the system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a pull-up circuit as taught by Floyd et al. in the system of Courtney.

***Allowable Subject Matter***

6. Claims 3 and 4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bo Hui A. Zhu whose telephone number is (571)270-1086. The examiner can normally be reached on Mon-Thur 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BZ  
August 31, 2007

  
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